

Starkrimson® Ultra Module Instructions

NOTES:

- **DANGER – HIGH VOLTAGE** – Do not work on the modules when they are on or being supplied power.
 - After turning off the power supply wait at least five (5) minutes before working on the module.
- Do not turn on the power to the module until all connections are properly made:
 - Power
 - Speakers
 - Analog Input
- Warranty – The 1-year warranty will be voided due to improper power supply connections. Please double-check all power supply connections before applying power. If you are uncertain, please contact me through www.orchardaudio.com/contact-us.

1. Connecting Power Supply

- If you are using the Hypex SMPS1200A100 please follow the instructions in [this document](#).
 - For wiring the SMPS1200A100 to AC power please use Hypex's power supply manuals.
 - Ensure that power supply is operating correctly before connecting to the amplifier modules.
- If you are using your own power supplies please note, the module requires a total of 5 power supplies to operate. The power supplies are wired to terminals J1, J2, and J3 on the board. The silkscreen on the modules details where each power supply connects.
 - +/-36V (+/-30 to 43V) - Amplifier Power Rails (16A minimum per rail to achieve 500W)
 - The absolute maximum voltage the amplifier will work with is +/-43.4V.
 - Use wire gauge appropriate for the high current. The thickest wire supported by the connector is 12 AWG.
 - +15V (11 to 16V) - MOSFET driver Supply - referenced to -36V rail - 100mA minimum
 - +/-18V (+/-15 to 22V) - analog supplies - 100mA per supply minimum.

2. Connecting Earth Ground

- Connect earth ground to X2, also labeled as "EARTH" on PCB.
 - If your chassis is already connected to earth ground, connection to X2 is not required because all mounting holes are also connected to X2.
 - If there are multiple amplifier modules in the same chassis, connect earth ground to only one (1) module, preferable the one closest to the AC power entry.

3. Connecting Amplifier Output

- The amplifier output is on quick-connect tabs X1 and X3. They are both labeled "OUT."
 - Connect to speakers. – Both amplifier outputs are hot, do not connect either to ground or Earth.

4. Connecting Amplifier Input

- The amplifier has two analog inputs. The inputs must be used individually. **Do not** use both inputs simultaneously. The unused input must be shorted (see below).
 - Balanced (X7)
 - When not used, short BAL+ and BAL- terminals together using a short wire.
 - Single-Ended (X4)
 - When not used, short SE+ terminal to either GND terminal using a short wire.

5. Module Protection Circuits

- Please review [this document](#), for an understanding of how the protection circuits operate.